Injury Extra (2005) **36**, 101–103

www.elsevier.com/locate/inext

CASE REPORT

Complete rupture of extensor tendon while playing Uileann pipe

S.M. Ali*, D. O'Farrell

Mid Western Regional Orthopaedic Hospital, Croom, Limerick, Republic of Ireland

Accepted 5 September 2004

Introduction

Extensor tendon rupture is commonly seen after trauma or in association with diseases like rheumatoid arthritis or Kienbock's disease. Here, we describe a case of extensor tendon rupture caused whilst playing the Ulileann pipe (traditional Irish musical pipes) Fig. 1. This unusual mechanism of injury has not been reported before in the literature.

Case report

Thirty four-year-old male right handed carpenter by occupation, presented to injury clinic complaining of an inability to extend his left middle finger, swelling and mild pain on the dorsal aspect of hand for 3 weeks. His symptoms started suddenly after playing the Uileann pipes at a music festival. He experienced a 'popping' sensation on the dorsum of the hand and was unable to continue playing.

On examination a flexion deformity of the left middle finger (Fig. 2) was present with swelling on the dorsal aspect of his hand and an inability to extend the finger.

Ultrasound of the hand (Fig. 3a and b) was performed which showed haematoma at the dorsal aspect of his hand and retracted edges of the extensor tendon.

Treatment

He had exploration of the dorsal aspect of his hand, which showed a complete tear of the extensor tendon distal to his wrist, the edges of which were retracted leaving a gap of more than 4 cm. A graft was obtained from palmaris longus and the tendon was sutured with Ethibond suture. The wrist was immobilized in a cast for a short period of four weeks and then a physiotherapy/rehabilitation programme was started. Three months after surgery, he could fully extend the middle finger and was back to his occupation as a carpenter. He has also recently returned to playing music.

Discussion

Extensor tendon injuries are divided into different zones from I to VIII.[1] (I) Injury at DIPJ, (II) injury at MP, (III) injury at PIPJ, (IV) injury at PP, (V) injury at MPJ, (VI) injury at MC, (VII) injury at distal retinaculum, (VIII) injury at distal forearm/wrist.

This injury was in zone VI, which has a better prognosis for the following reasons:

* Corresponding author. Present address: No-25, Residential Complex, Inverclyde Royal Hospital, Larkfield Road, Greenock, PA16 0XN, UK. Tel.: +44 1332 208 3890.

E-mail addresses: mohsinali2@hotmail.com, smali2233@yahoo.com (S.M. Ali).

1572-3461
doi:10.1016/j.injury.2004.09.006

Figure 1 Finger position whilst playing the Ulileann pipe.

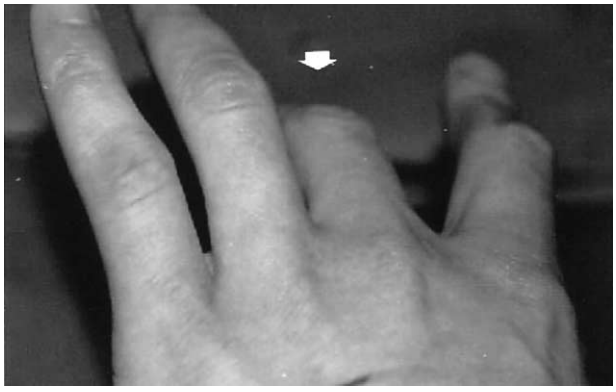
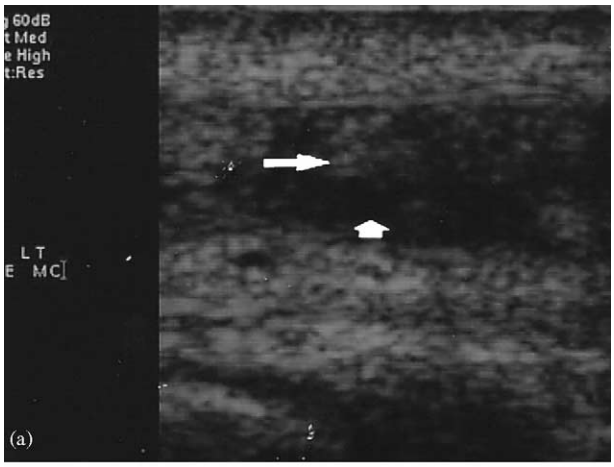


Figure 2 Flexion deformity of the middle finger.

1. It is unlikely to be associated with joint injuries.
2. Decreased tendon area in this zone lessens the potential of adhesion formation.
3. Increased subcutaneous tissue in this zone lessens the potential for adhesion.
4. Greater tendon excursion in this zone.
5. Complex tendon imbalances are less likely to occur in this zone.

Rupture of the extensor tendon whilst playing the Uileann pipes is a rare mechanism of injury. The main cause of rupture of the middle finger tendon is because this finger is under more stress, compared to other fingers. Besides the degenerative conditions of the tendon, such as rheumatoid arthritis, the other common reported causes of extensor tendon rupture are lacerations of the hand, fractures, during surgical procedures (Sauve—Kapandji/Darrach procedure—Wada T, 1997)[5], a rare disease — Kienbock's disease (Murase T, 1997, Yoshid 1990) and Secreetan's disease (peritendinous fibrosis). In 1901, 11 cases were reported by Henri Secreetan).[3,4]

There are many different treatment options described in the literature.[1,2] For this case, we used palmaris longus tendon graft, which achieved a favorable result and the patient was back at work within 12 weeks of injury.



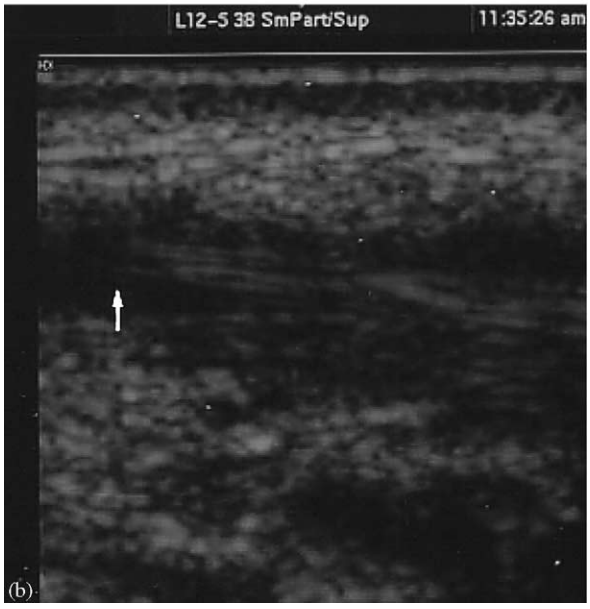


Figure 3 (a) Dorsum of the left hand, transverse section. Broad arrows shows haemorrhagic exudates surrounds proximal extensor tendon (narrow arrow). (b) Dorsum of the left hand, longitudinal section, arrow demonstrating ruptured proximal origin of the extensor tendon.

In conclusion, ultrasound is beneficial in identifying the injury in delayed presentation for pre-operative planning. Early mobilization will help in achieving a good out come.

References

1. Bradford W. Extensor tendon: anatomy, injury and reconstruction. J Plastic Reconstruct Surg 2000;106—4:1592—603.
2. Earl Z. Early dynamic splinting for extensor tendon injuries. J Hand Surg 1989;14A(1):72—6.

3. Murase T. Extensor tendon rupture due to Kienbock's disease. J Hand Surg (Br) 1997;22(5):597—8.
4. Newport M. Long term results of extensor tendon repair. J Hand Surg 1990;15A(6):961—6.
5. Wada T. Closed rupture of a finger extensor following the Sauve—Apandji procedure: case report. J Hand Surg (Am) 1997;22(4):705—7.